

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

I. Listing of Claims

1. (Currently Amended): An air induction system for inducing air into an engine of an automobile, the system comprising:

a duct in fluid communication with the engine of the automobile for directing inducted intake air into the engine; and

a first compliant member formed in a wall of a quarter wave tuner, wherein the quarter wave tuner is connected to the duct, and wherein the duct is made of a first material and the first compliant member is made of a second material that flexes as a result of an internal pressure fluctuation during air induction into the engine, and wherein the first compliant member includes an elongated slot disposed along a length of the wall of the duct and covered with the second material.

2. (Cancelled):

3. (Currently Amended): The air induction system of claim 1 2 wherein the second material is a thermoplastic elastomer.

4. (Original): The air induction system of claim 3 wherein the thermoplastic elastomer is an olefin/polypropylene blend.

5. (Cancelled):

6. (Original): The air induction system of claim 1 wherein the first material is a polymer.

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7. (Previously Presented): The air induction system of claim 1 wherein the first compliant member has a thickness that is less than half of a thickness of the wall of the duct.

8. (Cancelled):

9. (Previously Presented): The air induction system of claim 1 further comprising a second compliant member disposed on a resonator of the air induction system.

10. (Cancelled).

11. (Currently Amended): The air induction system of claim 9 further comprising a third compliant member disposed on a wall of an air filter box in fluid communication with the duct of the air induction system.

12. (Currently Amended): A method for reducing noise generated in an air induction system, the method comprising:

determining a length of an air duct;

determining a location along the duct where a maximum pressure of an acoustic standing wave is present;

forming a flexible portion of a second material into a wall of a quarter wave tuner connected to the duct, wherein the second material is over-molded over the duct; and

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positioning the flexible portion at the location of the maximum pressure of the acoustic standing wave.

13. (Original): The method of claim 12, further comprising forming the duct out of a first material.

14. (Cancelled):

15. (Cancelled):

16. (Original): The method of claim 12, wherein forming a flexible portion further comprises forming an aperture in the portion of the duct.

17. (Original): The method of claim 16, wherein forming a flexible portion further comprises covering the aperture with a thin layer of a polymer material.

18. (Original): The method of claim 16, wherein forming a flexible portion further comprises covering the aperture with a thin layer of an olefin/polypropylene blend.

19. (Original): The method of claim 12, wherein forming further comprises fixing the thin layer of polymer material to the duct over the aperture.

20. (Currently Amended): An air induction system for inducting air into an engine of an automobile, the system comprising:

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a duct in fluid communication with the engine of the automobile for directing inducted intake air into the engine;

a first compliant member formed in a wall of a quarter wave tuner connected to the duct, wherein the duct is made of a first material and the first compliant member is made of a second material that flexes as a result of an internal pressure fluctuation during air induction into the engine, wherein the compliant member includes an elongated slot disposed along a length of the duct and covered with the second material; and

wherein the first compliant member has a thickness that is less than half of a thickness of the wall of the quarter wave tuner.

21. (Cancelled):

22. (Currently Amended): The air induction system of claim 21 2 wherein the second material is a thermoplastic elastomer.

23. (Currently Amended): The air induction system of claim 22 3 wherein the thermoplastic elastomer is an olefin/polypropylene blend.

24. (Currently Amended): The air induction system of claim 20 4 further comprising a second compliant member is located at a portion of an air inlet tube of the air induction system that allows for dissipation of one or more acoustic standing waves.

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25. (Currently Amended): The air induction system of claim 20 4 wherein the first material is a polymer.

26. (Cancelled):

27. (Previously Presented): The air induction system of claim 20 further comprising a second compliant member disposed on a resonator of the air induction system.

28. (Cancelled):

29. (Previously Presented): The air induction system of claim 24 20 further comprising a third compliant member disposed on an air filter box in fluid communication with the duct of the air induction system.

30. (Currently Amended): A method for reducing noise generated in an air induction system, the method comprising:

determining a length of an air duct;

determining a location along the duct where a maximum pressure of an acoustic standing wave is present;

forming a flexible portion of a second material into a wall of a quarter wave tuner connected to the duct, wherein the flexible portion has a thickness less than half the thickness of the duct and wherein the second material is over-molded over the duct; and

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positioning the flexible portion at the location of the maximum pressure of the acoustic standing wave.

31. (Previously Presented): The method of claim 30, further comprising forming the duct out of a first material.

32. (Cancelled):

33. (Cancelled):

34. (Previously Presented): The method of claim 30, wherein forming a flexible portion further comprises forming an aperture in the portion of the duct.

35. (Previously Presented): The method of claim 34, wherein forming a flexible portion further comprises covering the aperture with a thin layer of a polymer material.

36. (Previously Presented): The method of claim 34, wherein forming a flexible portion further comprises covering the aperture with a thin layer of an olefin/polypropylene blend.

37. (Previously Presented): The method of claim 30, wherein forming further comprises fixing the thin layer of polymer material to the duct over the aperture.

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